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09/647,321	11/02/2001	Takao Murooka	K01-048	5741

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EXAMINER

KOCH, GEORGE R.

ART UNIT

PAPER NUMBER

1734

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/647,321

Applicant(s)

MUROOKA ET AL.

Examiner

George R. Koch III

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1, 2, and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda (JP 9-282954) and Takagi (US 5,518,570).

Ueda discloses an apparatus for manufacturing flat cable in which plural conductive wires arranged on the same plane are put between a first insulating tape on which first peeling sheets are stuck at predetermined intervals and a second insulating tape on which second peeling sheets are stuck at predetermined intervals to stick the first insulating tape, the conduct wires and the second insulating tape in order recited. Ueda does not disclose that the apparatus comprises first tension applying means and second tension applying means, detecting means, or control means as claimed.

Takagi discloses an apparatus for aligning webs that comprises first tension applying means and second tension applying means (both items 10), detecting means (both items 80 and items 85), and control means (item 86). Takagi differs from Ueda in that instead of controlling for the placement of a peeling sheet, the control aims to control the placement of the gap that corresponds to the peel location, which is the separation point for the flat cable segments. In order to ensure that the flat cable is

made correctly, the gap, or cuts in Takagi are required to match up and to be of the appropriate length, and Takagi utilizes the tension applying means, detecting means, and control means to achieve this ends. Takagi measures for the gap, and the registration between the gaps, i.e., the sticking error or registration error. One in the art would immediately appreciate that the gap, or cut, of Takagi is the functional equivalent of the peel location of Ueda, and one desiring to control the location of the peeling sheets in Ueda accurately would utilize the first and second tension applying means, the detecting means, and control means of Takagi in order to achieve accurate placement or registration of the components. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention to have utilized the first and second tension applying means, the detecting means, and control means of Takagi in the flat cable manufacturing apparatus of Ueda in order to achieve more accurate placement or registration of the elements relative to each other.

As to claim 7, one utilizing the method of using the combined apparatus of Ueda and Takagi would perform the claimed method.

As to claim 2, the first and second tension applying means are rotational control means controller rollers in the web transit process, which control the driving of the web from the tape rolls (items 10, see figure 12 and column 12, lines 13-48).

As to claim 4 and 8, Ueda discloses that the first and second insulating tape are stuck through the conductive wires in such a manner to oppose the first and second peeling sheet. Furthermore, as to claim 5, Ueda and Takagi are capable of being used such that the first and second peeling sheets are positionally shifted.

As to claim 6, Takagi as applied discloses dancer rolls, i.e., dancer arms (item 9)

6. Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda and Takagi as applied to claim 1 above and further in view of Ishibuchi et al (US Patent 6,032,713).

Ueda and Takagi are silent as to the use brake rolls.

Ishibuchi utilizes a brake roller (item 11 plus items 30 and 31) to adjust the tension on the traveling path of one layer of a web. Ishibuchi used this brake roller to correct the phase of the webs (see especially column 7). One in the art would appreciate that such a roller would improve the registration of elements on a web with elements on a second web. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the brake roller of Ishibuchi in order to improve the relative positioning of the webs with each.

7. Claims 5 and 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda and Takagi as applied to claim 1 and 7 above, and further in view of Ostman (US Patent 4,357,750).

Ueda and Takagi are silent as to the use of manufacture of flat cable in which the first insulating tape and second insulating tape are stuck through the conductive wires in such a manner that the first and second peeling sheets are positionally shifted at predetermined intervals.

Ostman discloses a flat cable in which the ends of the first insulating tape (42) and the second insulating tape (item 44, see Figure 21) are positionally shifted relative

to each other. One desiring to make such a flat cable using the method and apparatus of Ueda and Takagi, which affords excellent registration control and production efficiency, will immediately recognize that the peeling sheets need to be, first, of different size, and second, positionally shift relative to each other. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to manufacture the cable of Ostman by use of the method of Ueda and Takagi in order to increase the productivity of the apparatus of Ueda and Takagi.

8. Claims 1, 2, 5-7 and 9 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Ostman, Ueda and Takagi.

Ostman discloses a flat cable in which the ends of the first insulating tape (42) and the second insulating tape (item 44, see Figure 21) are positionally shifted relative to each other. Ostman does not disclose an apparatus for manufacturing such cable which utilizes peeling sheets.

Ueda discloses an apparatus for manufacturing flat cable in which plural conductive wires arranged on the same plane are put between a first insulating tape on which first peeling sheets are stuck at predetermined intervals and a second insulating tape on which second peeling sheets are stuck at predetermined intervals to stick the first insulating tape, the conduct wires and the second insulating tape in order recited. Ueda does not disclose that the apparatus comprises first tension applying means and second tension applying means, detecting means, or control means as claimed.

Takagi discloses an apparatus for aligning webs that comprises first tension applying means and second tension applying means (both items 10), detecting means (both items 80 and items 85), and control means (item 86). Takagi differs from Ueda in that instead of controlling for the placement of a peeling sheet, the control aims to control the placement of the gap which corresponds to the peel location, which is the separation point for the flat cable segments. In order to ensure that the flat cable is made correctly, the gap, or cuts in Takagi are required to match up and to be of the appropriate length, and Takagi utilizes the tension applying means, detecting means, and control means to achieve this ends. Takagi measures for the gap, and the registration between the gaps, i.e., the sticking error or registration error. One in the art would immediately appreciate that the gap, or cut, of Takagi is the functional equivalent of the peel location of Ueda, and one desiring to control the location of the peeling sheets in Ueda accurately would utilize the first and second tension applying means, the detecting means, and control means of Takagi in order to achieve accurate placement or registration of the components. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the first and second tension applying means, the detecting means, and control means of Takagi in the flat cable manufacturing apparatus of Ueda in order to achieve more accurate placement or registration of the elements relative to each other. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the combined invention of Ueda and Takagi to manufacture the cable of Ostman in order to achieve the benefits of production speed and accuracy in flat cable manufacture.

As to claim 7, one utilizing the method of using the combined apparatus of Ostman, Ueda and Takagi would perform the claimed method.

As to claims 5 and 8, Ostman discloses that the ends of the insulating tape are positionally shifted.

As to claim 2, the first and second tension applying means are rotational control means controller rollers in the web transit process, which control the driving of the web from the tape rolls (items 10, see figure 12 and column 12, lines 13-48).

As to claim 6, Takagi discloses dancer rolls (item 9).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (703) 305-3435 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-800-877-8339 and giving the operator the above TDD number. The examiner can normally be reached on M-Th 10-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



George R. Koch III
June 6, 2003



RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700